

Applicant: Robert W. Coulombe
Serial No.: 10 / 649,219
Gp. Art Unit: 3643 (Robert P. Swiatek)
Filing Date: August 26, 2003

REMARKS

By this Amendment, Claims 1, 3, 7, 8, 9, 12, 13, 18, 21, 26, 30, 31, 32, 36, and 43 have been amended; and Claims 46 – 49 have been added. No claims have been cancelled. Accordingly, Claims 1 - 49 are pending in this Application.

Preliminarily, in the “Office Action Summary” (PTOL-36), the Examiner allowed Claims 12 – 25 and 38 – 45. Further, The Examiner advised that Claims 1 – 5, 29, 31 – 33, 36 and 37 would be allowable if rewritten in a manner to obviate certain objections/rejections. Other claims were rejected.

By this Amendment, all grounds of objection and/or rejection raised by the Examiner have been responded to. Applicant’s Attorney traverses the Examiner’s rejections and requests reconsideration of this Application.

The respective issues raised by the Examiner will now be addressed herein, beginning with the Examiner’s Objections and proceeding to the Examiner’s substantive Rejections under 35 USC Sections 112, ¶2, 102(b), and 103(a).

The Drawings:

No objection has been raised to the drawings, as filed. Accordingly, the Drawings have not been amended.

Objections to the Declaration as Filed:

The Examiner contends that the Declaration filed with the Application is defective.

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Applicant's Attorney has submitted a new Declaration, in compliance with 37 CFR 1.67(a), to the Inventor for signing, and will submit same to the Patent Office as soon as such Declaration is received from the Inventor.

Objections to the Disclosure:

The Examiner objected to the disclosure, for reasons stated.

The Specification is amended herein as follows: (1) Page 1: the status of the parent application, upon which this Application is based, was updated; and (2) Page 27: an error in element identification was obviated.

By the amendments herein, the Examiners objections are believed obviated.

Claim Objections:

The Examiner objected to independent Claim 43 because of an informality. Claim 43 is not under rejection, such as under a Section of Title 35 of the United States Code.

Claim 43 was amended herein by replacing the word "on" with -- one --.

By the amendment herein, the Examiner's objection is believed obviated.

Accordingly, Claim 43 is submitted as being patentable and in condition for allowance.

Claim Rejections: 35 USC Section 112, Second Paragraph:

Claims 1-5, and 26-37 are rejected under 35 USC 112, ¶2, as being indefinite because certain claim terms lack antecedent basis.

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By this Amendment: (1) independent Claims 1 and 26 are amended to replace "elastomer", respectively, with --pad of elastomeric material-- and --elastomeric material--; (2) dependent Claim 31 is amended to depend from Claim 29, wherein support for the term "stiffening ribs" is found; and (3) dependent Claim 36 is amended to depend from Claim 31, wherein support for the term "hospital plate" is found.

Accordingly, Applicant's Attorney submits that the Examiner's rejections of Claims 1 and 26 under 35 USC 112, ¶2 have been obviated.

The Examiner advised that Claims 1-5 would be allowable if rewritten or amended to overcome the rejections under 35 USC 112, ¶2, set forth in the Office Action.

Independent Claim 1 has been amended in a manner to overcome the 35 USC 112 ¶2 rejection. Dependent Claims 2-5 were not rejected and not amended herein. Accordingly, Applicant's Attorney submits that Claim 1, and Claims 2-5 dependent thereon, are allowable and in condition for allowance.

Claim Rejections: 35 USC Section 102(b):

Claims 26, 30 and 35 are rejected under 35 USC 102(b) as being anticipated by Schrader et al (1,212,266). The Examiner contends that sheet 4 of Schrader et al. is considered to constitute a "planar flexure plate" which includes shaped openings.

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Applicant's Attorney traverses the Examiner's Section 102(b) rejections for the reasons given herein below.

In order to anticipate, each claim requirement must be found in a single reference. As will be pointed out, the Schrader et al. reference is deficient, and as such, the anticipation rejections of Claims 26, 30, and 35 under 35 USC Section 102 should be withdrawn.

Claim 26 is directed to a horseshoe for covering and protecting the bottom surface of a horse's hoof, which requires, inter alia, "a flexure plate embedded into a first elastomeric material, --- said elastomeric material having an upper surface that is abutable in direct contacting engagement against the bottom surface of the hoof, a lower surface that engages the ground, ---.

Schrader et al. shows a sheet of metal 4 embedded in rubber 9, and a resilient sheet 13 of suitable fabric or leather. The sheet 13 is sandwiched between the bottom surface of the horse's hoof and the rubber 9. Because of the sheet 13, the rubber 9 (with plate 4) is spaced from and prevented from having any direct contacting engagement with the bottom surface of the horse's hoof. Restated, the rubber 9 (with plate 4) does not have an upper surface that is in direct contacting engagement with the bottom surface of the horse's hoof, as required by Claim 26.

Accordingly, the Examiner's rejection of Claim 26 under 35 USC 102(b), based on Schrader et al, should be withdrawn.

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Applicant's Attorney submits that Claim 26 is patentable over the prior art and in condition for allowance.

Claims 30 and 35 variously depend from Claim 26 and are submitted as being patentable for the same reason that Claim 26 is allowable.

Claim 30 further requires that "... said flexure plate [is] adapted to overlie the frog portion of the horse's hoof and ... [forms] a pair of shaped openings ... [which] are removably filled with elastomeric material, removal of the elastomer exposing the bottom surface of the hoof to permit the horse's hoof to be accessed to tend to a wound thereto ...".

In Schrader et al., the sheet 13 of fabric is in complete covering relation against the bottom surface of the horses hoof and has no openings. The sheet 13 prevents any access to the frog portion of the horse's hoof to tend to a wound. The plate 4 has apertures 6 which are permanently filled with rubber. The apertures 6 are not "shaped openings", and the rubber is not intended to be removed from these openings to expose the bottom surface of the hoof to permit the user to tend to a wound in the frog area of the horse's hoof. Even if the rubber were to be removed from the apertures 6, the sheet 13 would prevent access to the frog portion of the horse's hoof.

The Examiner's reliance on Schrader et al. is believed in error and the rejection of Claim 30 under 35 USC 102(b) should be withdrawn.

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Claim 35 further defines a group of materials, including rubber, which are suitable for practicing the invention. Schrader et al. discloses that the plate 4 is embedded in rubber, which is only one of the materials recited in the required group. However, Schrader et al. does not disclose the group of materials required by Claim 35.

The Examiner's reliance on Schrader et al. is believed in error and the rejection of Claim 35 under 35 USC 102(b) should be withdrawn.

Applicant's Attorney submits that Claims 30 and 35 are patentable over the prior art and in condition for allowance.

Claim Rejections: 35 USC Section 103(b)

Claims 6 and 7 are rejected under 35 USC 103(a) as being unpatentable over Schrader et al. in view of Zeller (989,469). The Examiner contends that the horseshoe of Schrader et al. includes a pad 11 and toe clips 5, but lacks an embedded stiffening plate with a traction element, and it would have been obvious to one skilled in the art to provide the horseshoe of Schrader et al. with an embedded stiffening plate having a raised traction element, in view of the teaching of Zeller that such a plate reinforces the shoe and provides an anti-slip function (see elements 10 and 12 of Zeller). As to Claim 6, the Examiner further contends that the Schrader et al. horseshoe "*could*" (Examiner's emphasis) be sandwiched between a horse's hoof and the mating face of another horseshoe. As to Claim 7, the Examiner further contends that the Schrader et al. pad 11 could be wedge shaped.

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Applicant's Attorney traverses the Examiner's rejections of Claims 6 and 7 under 35 USC 103(a) as being based on an improper hindsight reconstruction of Schrader et al. in view of Zeller. In fact, the Schrader et al. and Zeller references each teach away from the claimed invention.

Schrader et al. discloses a horseshoe assembly assembled to the bottom surface of a horse's hoof, wherein a resilient shock absorbing sheet 13 of leather or fabric is sandwiched between the hoof and a body 9 of rubber. The top surface of the sheet 13 is abutted against the bottom surface of the horse's hoof and the bottom surface of the sheet is abutted against the body 9. The rubber body 9 is not against the bottom surface of the horse's hoof, but spaced therefrom by the sheet 13. A plate 4 is within the rubber and tangs 5 thereon extend outwardly of the rubber wherein to be bent up and into engagement with the horse's outer periphery.

Zeller discloses an auxiliary horseshoe wherein flexible straps 6 removably hold a resilient rubber pad 4 against the ground-engaging bottom surface of a horseshoe 2, which in turn is fixedly secured to the bottom surface of the horse's hoof. The removable auxiliary horseshoe pad 4 does not engage the bottom surface of the horse's hoof but engages the bottom surface of the horseshoe 2.

Claim 6 is directed to a "shock absorbing pad adapted to be sandwiched between the bottom surface of a horse's hoof and the mating face of a horseshoe attachable to the bottom surface of said hoof". Further, Claim 6 requires that the shock absorbing pad comprise "a body portion formed of elastomeric material ... and

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a generally planar stiffening plate embedded interiorly of said body portion, said stiffening plate including a raised traction element extending away from the bottom surface .---“.

Schrader et al and Zeller do not show and do not suggest a shock absorbing pad that is sandwiched between the bottom surface of a horse's hoof and the mating face of a horseshoe. These references teach that an elastomeric pad be on the bottom surface of a horseshoe. Contrary to that required by Claim 6, the Schrader et al. and Zeller references teach away from placing a shock absorbing pad into sandwiched arrangement between the horse's hoof and a horseshoe.

In Schrader et al, the resilient shock absorbing sheet 13 is sandwiched between the hoof and the horseshoe. This sheet is not of elastomeric material and does not include traction elements. To the extent that body 9 (of rubber and with plate 4) is assembled to the horse's hoof, Schrader et al teaches that the rubber body 9 not be sandwiched between the hoof and a horseshoe. Indeed, the rubber body 9 (with plate 4) is essentially the horseshoe.

Reconstruction of Schrader et al. with the teaching of Zeller is of no help.

In Zeller, the pad 4 of elastomeric material is an auxiliary horseshoe adapted to be removably attached to and extend from the bottom surface of a primary horseshoe fixedly attached to the bottom surface of the horse's hoof. The primary horseshoe 2 is fixedly secured to the bottom surface of the horse's hoof 1. The auxiliary horseshoe 4 is a second horseshoe, which is seated within downwardly

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extending calks 3 of the primary horseshoe 2 and secured by straps 6 onto the primary horseshoe.

Contrary to Claim 6, in Zeller, the pad 4 is spaced from bottom surface of the horse's hoof, and held against the bottom surface of the horseshoe by the straps 6. The auxiliary horseshoe (i.e., the pad) 4 is not secured to nor intended to be secured to the bottom surface of the horse's hoof.

Accordingly, although Schrader et al and Zeller have elements of interest, these references do not show, or make obvious, the invention required by Claim 6. Any such reconstruction of the references, in the manner relied upon by the Examiner, is an impermissible hindsight reconstruction, using Applicant's claim as a road map.

The Examiner suggests that the Schrader et al. horseshoe "*could*" (Examiner's emphasis) be sandwiched between the horse's hoof and the mating face of another horseshoe. This "suggestion" of the Examiner's is a clear admission that Schrader et al. is totally deficient as a reference, either taken alone or in combination. There is no suggestion in Schrader et al. that the resilient hoof engaging sheet 13 be discarded. The only suggestion for "could" is to meet the requirements of Claim 6.

Applicant's Attorney submits that Claim 6 patentably defines over the prior art of record and is in condition for allowance.

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Claim 7 depends on Claim 6 and is submitted as being patentable for the same reason that Claim 6 is patentable.

Claim 7 further requires that the “...pad is wedge shaped for effecting a change in balance of the hoof and/or gait of the horse.”

The Schrader et al and Zeller references do not show and do not suggest an elastomeric pad that has a raised traction element, and is wedge shaped, as required by Claim 7. These references do not show and do not suggest an elastomeric pad that is wedge shaped for effecting a change in balance of the hoof and/or gait of the horse, as required by Claim 7.

Zeller is directed to a temporary, or auxiliary horseshoe, that is used in conjunction with a primary horseshoe. There is no suggestion that the auxiliary horseshoe be anything other than a temporary add-on, certainly not for the purposes of addressing long term problems associated with gait and balance.

Schrader et al. suggests the use of a sheet of resilient material to cushion what might otherwise be a hardened elastomer, wherein to obviate inadequate cushioning against the bottom surface of the horse's hoof.

If one were seeking to increase the wearing comfort of the shoe, Applicant's Attorney submits that (a) Schrader et al. suggests changing the flat sheet 13, and thus the resilience between the hoof and the body 9, and (b) Zeller suggests strapping on an auxiliary horseshoe of different rubber. Each reference, however, is silent as to these possibilities. The suggestions of Applicant's Attorney and the

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Examiner are merely speculation, because the references do not show, do not suggest, and there is no motivation in these references for the suggested changes. The references relied upon by the Examiner do not render obvious under 35 USC 103(a) the invention as required by Claim 7.

Accordingly, Applicant's Attorney submits that Claim 7 is patentable over the prior art and is in condition for allowance.

Claims 8-11 are rejected under 35 USC 103(a) as being unpatentable over Christopher (698,904) in view of Schrader et al. The Examiner contends that the elastomeric pad 8 of Christopher includes raised traction elements 15, 17 but lacks a toe clip; it would have been obvious to provide one or more toe clips, in view of the teaching of Schrader et al. (Page 1, lines 64-68).

Applicant's Attorney traverses the Examiner's rejections of Claims 8-11 under 35 USC 103(a) as being based on an improper hindsight reconstruction of the Christopher and Schrader et al. references.

Claim 8 is directed to a kit, requiring a U-shaped horseshoe and an elastomeric pad, which pad is secured to the bottom of the horse hoof, and which horseshoe is attached to the pad. Claim 8 requires, inter alia, that the pad include a raised traction section for providing traction with the ground, and a toe clip, which traction section is positioned centrally of the pad wherein to overlie the frog portion of the horse's hoof when the pad is attached thereto.

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Christopher locates a cushion at the center of the pad and lacks toe clips. Contrary to Claim 8, Christopher does not show or suggest a pad that includes a raised traction section that overlies the frog of the horse's hoof. Reconstruction of Christopher (with the toe clips of Schrader et al) does not meet or render obvious the requirements of Claim 8.

Applicants Attorney submits that Claim 8 is patentable over the prior art and is in condition for allowance.

Claim 9 is dependent of Claim 8 and is patentable for the same reason that Claim 8 is patentable.

Claim 9 further defines, inter alia, the traction section and first and second portions of the traction section. The prior art does not show or suggest the provision of the requisite traction section in combination with the pad. Accordingly, Claim 9 is patentable.

Claims 10 and 11 are dependent from Claim 8 and are submitted as being patentable for the same reason that Claim 8 is patentable.

Claims 27 and 28 are rejected under 35 USC 103(a) as being unpatentable over Schrader et al in view of Smith (1,516,508). The Examiner contends that the Schrader et al. horseshoe lacks a toe calk, but would have been obvious to employ such a calk in view of the teaching of Smith that an embedded toe calk provides a horseshoe with enhanced traction and minimizes slippage (page 1, lines 68-70 of

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Smith). As to Claim 28, the precise configuration would have been obvious in order to integrate it with the existing flexure plate of the Schrader et al. horseshoe.

Applicant' Attorney traverses the Examiner's rejection of Claims 27 and 28 under 35 USC 103(a) as being an improper hindsight reconstruction of the Schrader et al. and Smith references.

Claims 27 and 28 depend from Claim 26 and are submitted as being patentable for the same reason that Claim 26 is patentable.

Additionally, Claim 27 further requires "a toe calk ... at the forward end portion of said flexure plate and projecting upwardly from said lower surface [of the elastomeric material that engages the ground]"

The Schrader et al horseshoe discloses a flexure plate 4 embedded in a rubber body 9. The flexure plate includes toe clips 5 to engage the horse's hoof but does not show and does not suggest a toe calk.

Smith discloses a horseshoe 10 having a clip 11, fastened directly to the horse's hoof, and a hardened hollow box-like calk member 13, attached to the bottom of the horseshoe 10. The calk has a front portion 14, side portion 15 and interconnecting wall portion 16, and rubber or pads 22 are molded into the box. In Smith, the lower surface of the rubber 22 and the calk 13 are coplanar. The calk 13 does not project upwardly from the lower surface of the elastomer 22,

Applicant's Attorney submits that there is no motivation to reconstruct the horseshoe of Schrader et al. to include a toe calk, in view of the teaching of Smith.

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Even if the references are reconstructed in a manner suggested by the Examiner wherein to provide the Schrader et al. horseshoe with the box-like toe calk 13 and elastomer 22 of Smith, the reconstruction fails to meet the requirements of Claim 27.

That is, Claim 27 requires, inter alia, that the toe calk upwardly from the lower surface of the elastomer. Smith teaches that the calk and elastomer be coplanar. As such, Smith teaches away from the requirements of Claim 27.

Claim 27 depends from Claim 26 and requires, inter alia, that the flexure plate/elastomeric material are in contacting engagement with the bottom surface of the horse's hoof. The Schrader et al. and Smith references both teach that the elastomer and calk be spaced from the bottom surface of the horse's hoof. As such, these references teach away from the requirements of Claim 27.

Applicant's Attorney submits that Claim 27 is not obvious under 35 USC 103(a) in view of the prior art references to Schrader et al. and Smith. As such, Claim 27 is submitted as being patentable and in condition for allowance.

Claim 28 further requires, inter alia, that the toe calk be generally arcuate and includes an annular groove wherein the bottom end of the toe calk and annular groove are embedded in the elastomeric material.

The Smith reference does not show and does not suggest and teaches away from a toe calk that is arcuate, has spaced endwalls, a groove extending between spaced endwalls, and wherein a lower end of the calk (and groove) is embedded in

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the elastomer. Smith shows a toe calk 13 that is box-like and forms a container that is filled with the elastomer 22. Contrary to the claimed invention, the Smith toe calk 13 is not arcuate, and does not include spaced endwalls, or a groove that extends between the endwalls and is embedded in the elastomer. The Smith toe calk 13 encircles the elastomer 22. Contrary to the claimed invention, the Smith toe calk is not embedded in the elastomer. Further, in Smith, the end faces of the elastomer 22 and the toe calk 13 are coplanar. Contrary to the claimed invention, the toe calk 13 does not extend upwardly from the end face of the elastomer.

Applicant's Attorney submits that Claim 28 is not obvious under 35 USC 103(a) in view of the prior art references to Schrader et al. and Smith. As such, Claim 28 is submitted as being patentable and in condition for allowance.

Claim 34 is rejected under 35 USC 103(a) as being unpatentable over Schrader et al. The Examiner contends that although the use of an aluminum or polyurethane flexure plate with Schrader et al, while not disclosed, nonetheless would have been obvious to one skilled in the art wishing to reduce manufacturing costs.

Claim 34 is dependent on Claim 26 and is submitted as patentably defining over the prior art for the same reason that Claim 26 is patentable.

Further, Applicant's Attorney traverses the Examiner's rejection as hindsight, as in the form of an unsupported "taking notice" of things.

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The Examiner's conclusion relies upon a proposition that one skilled in the art is solely looking for ways to reduce manufacturing costs. While costs are important, the complete horseshoe assembly which is affixed to the hoof of a horse come as a result of a number of factors. A primary consideration is the health and well being of the foot. The best materials are as a result oftentimes only found in their combination.

As admitted by the Examiner, Schrader et al. does not show or suggest the use of a flexure plate of aluminum or polyurethane. As material science progresses, new materials provide different opportunities. Flexure of the plate, such as in combination with the central traction section, and the material and geometry of the elastomer, may provide unexpected circulatory benefits to the frog portion of the horse's hoof. As such, the fact is that one skilled in the art of making things cheaper may not be the person in the art providing a better horseshoe assembly for the horse's hoof.

Applicant's Attorney submits that the Examiner's rejection is unsupported by prior art and that unless credible art is provided such rejection should be withdrawn.

Applicant's Attorney submits that Claim 34 is not obvious under 35 USC 103(a) in view of the prior art reference to Schrader et al. As such, Claim 34 is submitted as being patentable and in condition for allowance.

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Art Cited But Not Applied by the Examiner:

Applicant's Attorney notes the patents to Hallanan (US 503,848), Downey (US 684,416), and White (US 825,437) as examples of horseshoe structures.

New Claims:

Claims 1 – 45, as originally filed, are directed to various aspects of the invention, and have been discussed, at least in part, in relation to this Amendment and the objections/rejections of the Examiner.

Claims 46 – 49 have been newly added, and are directed to various aspects of the invention. Independent Claim 46 is directed to apparatus for providing traction to the hoof of a horse. Independent Claim 47 and dependent Claims 48 and 49 are directed to a horseshoe for the hoof of a horse.

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CONCLUSION AND SUMMARY

Upon receipt from the Inventor, a new Declaration will be submitted.

The Specification was amended in a manner suggested by the Examiner. No new matter was added.

Claims 1 – 45 were examined and remain in the Application. Claims 1, 3, 7, 8, 9, 12, 13, 18, 21, 26, 30, 31, 32, 36, and 43 are amended and no claims are cancelled.

By this Paper, Claims 46 – 49 are newly added.

Claims 12 – 25, and 38 – 45 are allowed. In this Paper, allowed Claims 12 and 43 are amended to correct minor errors.

Claims 1 – 11 and 26 – 37 were rejected, for reasons given.

Claims 1 – 5, 29, 31 – 33, 36, and 37 were noted as being *allowable*, if rewritten in a certain way. Applicant's Attorney submits that by the amendments herein to certain of the claims, and in view of the comments herein above, Claims 1-5, 29, 31-33, 36 and 37 are now allowable and in condition for allowance.

Applicant's Attorney submits that by the amendments to certain of the claims and/or in view of the comments herein above regarding the Examiner's rejections under 35 USC Sections 112 ¶2, based on indefiniteness, and/or 102(b) and 103(a) based on prior art patents applied against the claims, that Claims 1 – 11 and 26 – 37 are definite, patentably define over the prior art, and are in condition for allowance.

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Applicant's Attorney submits that all requirements, or bases of objection and/or rejection have been properly traversed and/or obviated.


Applicant's Attorney submits that newly added Claims 46 – 49 are patentable over the prior art of record.

Applicant's Attorney submits that Claims 1 – 49, all claims pending in this application, are patentable over the prior art of record and in condition for allowance.

Applicant's Attorney respectfully solicits the issuance of a Notice of Allowance of this Application, including Claims 1 - 49.

If the Examiner believes that a telephone conference would expedite this case, such call is encouraged.

Respectfully submitted,


Arnold S. Weintraub
Reg. No. 25,523

Direct Dial: (248) 865 - 9430

Facsimile: (248) 865 - 9436

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THE WEINTRAUB GROUP, P.L.C.
32000 Northwestern Highway, Suite 240
Farmington Hills, MI 48334